Mapping Visualization On-Demand onto a Virtual Globe: an Appealing Complement to Browser-Based Navigation

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In the context of current browser-based navigation
- Universal, widespread and powerful tool
  - WIMP: Windows, Icon, Menu, Pointer
  - Incremental features
    - Multiple Plug-ins/Extensions
    - AJAX – Asynchronous communications
    - Rich client applications
- No disruptive interface innovation

Visualization On-Demand
A Service Oriented Architecture (VizOD) [7] providing up-to-date Information Visualization techniques, such as multi-resolution maps.

Virtual Globe

The VizOD API playground [3] allows users to pick up graph layout, attributes, rendering, etc.. Data are extracted given a URL.

Google Earth [2] is used, instead of connecting to a geographical database is connected to VizOD using KML [1].

We identified and focused on three improvable features
- I don’t want to install or learn yet another environment
- I want to quickly resume a multiple pages session
- I want an efficient way to explore large datasets, using my visual and interactive abilities

User needs

Our approach is to combine the following techniques...

...as a complement to current browser-based navigation

Preliminary Results
- Quick users adoption as a complement to browser-based navigation and close to their mental model

References

Future Work
- Evaluations with complex study cases
- Improve prototype and explore other interactive environments